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EXAMINER

CHANKONG, DOHM

ART UNIT

PAPER NUMBER

2152

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,955

Applicant(s)

NISHI, KOJI

Examiner

Dohm Chankong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1> This action is in response to Applicant's request for continued examination. Claims 1-8, 10, 11 and 14 have been amended. Claims 16-18 are new. Claims 1-18 are presented for further examination.

2> This is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3> A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3.30.2006 has been entered.

Response to Arguments

4> Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

5> Claims 3 and 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6> Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Specifically, claim 4 is rejected for lacking proper antecedent basis: "said bandwidth broker"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7> Claims 1, 2, 10, 11 and 13-18 are rejected under 35 U.S.C § 102(e) as being anticipated by Giese, U.S Patent No. 6,621,895.

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8> As to claim 1, Giese discloses a quality assured network service provision system compatible with a multi-domain network, wherein

a communication network comprising a plurality of operations management networks (domains) which are connected to a plurality of customer networks with user terminals and which are respectively managed by different providers [Figures 7, 9 & 13 | column 7 «lines 30-42» | column 10 «lines 13-17»], the system comprising:

a network service management device for collectively managing device clusters incorporated within an operations management network of each of said providers, and negotiating with another operations management network which is managed by another provider and with which interconnection is to be established based on a required quality level from a customer so as to ensure an end-to-end quality level [column 4 «lines 40-57» | column 5 «line 62» to column 6 «line 2» | column 13 «lines 21-57»]; and

a service broker device at a functional host layer of said network service management device [column 15 «lines 44-67»], the service broker device receiving service information on services which can be provided by the respective domains and domain information which are output from the network service management device which belongs to each of the providers [column 11 lines 39-52» | column 15 «lines 22-32» | column 19 «lines 13-14»], storing information on the operations management networks managed by the respective providers [column 11 «lines 9-15» | column 18 «lines 63-67»], and brokering a service level agreement between the operations management networks of said plurality of providers by selecting route information and a network service management device for ensuring an end-to-end

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quality level required by the customer based on the received service information and domain information [column 5 «lines 1-6» | column 13 «lines 1-14» | column 15 «lines 11-17»].

9> As to claim 2, Giese discloses the quality assured network system compatible with a multi-domain network of claim 1, wherein

said network service management device comprises an outputting device for outputting the service information on services which can be provided by each of said providers and the domain information to said multi-service broker [column 3 «lines 61-67» | column 5 «lines 62-67» | column 15 «lines 50-67»]; and

said service broker device comprises a device for storing output information from each network service management device, selecting a network service management device of a domain which will satisfy the required quality level when a network service request is generated by the customer, and issuing instructions for introducing and setting necessary information [column 11 «lines 9-15» | column 15 «lines 7-17 and 50-67» | column 18 «lines 63-67»].

10> As to claim 10, as it does not teach or further define over the claimed limitations of claim 1, claim 10 is similarly rejected for the same reasons set forth for the rejection of claim 1, *supra*.

11> As to claim 11, Giese discloses providing a single service broker that manages the domain information and the information on services which can be provided by the respective

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providers for all the operations management networks connected thereto [column 15 «lines 33-67»].

12> As to claim 13, Giese discloses the quality assured network service provision system compatible with a multi-domain network of claim 1, wherein quality levels which can be provided and methods for specifying the quality levels are different for the respective providers, and the service agreement is reached in such a way that required quality levels are associated with service levels in the respective providers in order to maintain the quality levels at a constant level in the multi-domain network [column 11 «lines 32-47»].

13> As to claim 14, Giese discloses the quality assured network service provision system compatible with a multi-domain network of claim 1, wherein a bandwidth broker provided in the network service management device refers to available resource capacity between the domains and service information, and determines whether an agreement is possible by checking whether requested service information can be accommodated by a service agreed to between the domains [column 13 «lines 21-30» | column 14 «lines 16-32»].

14> As to claim 15, Giese discloses the quality assured network service provision system compatible with a multi-domain network of claim 1, wherein the agreement is one relating to service conditions for providing a service of consistent quality throughout the multi-domain network which satisfies the required quality level [column 13 «lines 21-30»].

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15> As to claim 16, Giese discloses the network service management device includes a means for negotiating with the other network service management device belonging to the other domain with which interconnection is to be established under a condition for satisfying the required quality level from the customer which is included in a response received from the service broker device, for detecting the status of communication devices constituting each domain, and for performing setting and control for satisfying the required quality level [column 13 «lines 1-30» | column 13 «line 58» to column 14 «lines 15»].

16> As to claim 17, Giese discloses the service management device transfers a service level agreement request which is necessary to provide the end-to-end quality level required by the customer to the other network service management device belonging to the other domain, and if the other service management device accepts the service level agreement request, the other network service management device registers service level agreement information included in the service level agreement request, sends a reply with respect to the acceptance of the service level agreement request, and negotiates the service level agreement [column 11 «line 32» to column 12 «line 27» | column 14 «lines 49-56» | column 15 «lines 7-32»].

17> As to claim 18, Giese discloses the required quality level is a delay value [column 14 «lines 39-42»].

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18> Claim 4 is rejected under 35 U.S.C § 103(a) as being unpatentable over Giese in view of Yates et al, 6.330.586 ["Yates"].

19> As to claim 4, Giese does not disclose:

said service broker device comprises a storage device for storing service information and domain information received from said network service management device; and
a data processing device for performing information processing such as writing and reading of information to and from said storage device, as well as providing a security management function relative to said bandwidth broker.

20> In the same field of invention, service provisioning, Yates discloses:

said service broker device comprises a storage device for storing service information and domain information received from said network service management device (column 15, lines 41-60, column 18, lines 38-47 and column 23, lines 65-67); and

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a data processing device for performing information processing such as writing and reading of information to and from said storage device, as well as providing a security management function relative to said bandwidth broker (column 24, lines 1-7 and lines 56-61).

It would have been obvious to one of ordinary skill in the art to incorporate Yates' storage device into Giese's service broker device as storage devices are well known in the art for providing more efficient access of required information for network devices. Also, it would have been obvious to incorporate Yates' data processing device to enable security-type functionality into Giese's system. Such security functionality is well known in the art for providing safe and secure data transmission and would enhance Giese's service provisioning system.

21> Claims 8-9 are rejected under 35 U.S.C 103(a) as being unpatentable over Giese in view of Graham et al (hereinafter Graham), U.S Patent No. 6,594,700.

22> As to claim 8, Giese discloses a method of providing a quality assured network service compatible with a multi-domain network, comprising:

the limitations of the system of claim 1 [see claim 1, supra];

wherein said method comprises:

a service agreement step in which a request is received from the customer, said service broker device and said network management device reach an agreement relating to service conditions for providing a service which will satisfy the required quality level, and route information for an appropriate domain and a network management device are selected for

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ensuring an end-to-end quality level required by the customer based on the service information and domain information[column 11 «lines 32-57» | column 12 «lines 1-57»]; and a service provisioning step for performing service provision on a communication device based on service conditions and route information agreed upon in said network management device [column 15 «lines 7-17 and 33-67»].

However, Giese does not teach a service registration step in which a network management device of each provider registers in said service broker device, domain information comprising configuration information and information on services which can be provided.

23> Graham teaches a service registration step in which a network management device of each provider registers in said service broker device, domain information comprising configuration information and information on services which can be provided (column 6, lines 12-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Graham's service registration step into Giese to provide a central registry for providing convenient and efficient method for clients to look up services.

24> As to claim 9, Giese discloses the method of providing a quality assured network service compatible with a multi-domain network according to claim 8, wherein said service provisioning step further comprises a step for service order processing [column 15 «lines 26-32»], a step for route design processing [column 15 «lines 11-13»] and a step for provisioning processing [column 15 «lines 44-46»].

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25> Claim 12 is rejected under 35 U.S.C § 103(a) as being unpatentable over Giese in view of Arunchalam et al, U.S Patent No. 6.631.122 ["Arunchalam"].

26> Giese does not disclose intra-domain or inter-domain routing.

27> Arunchalam discloses the quality assured network service provision system compatible with a multi-domain network of claim 1, wherein the service broker device designs an inter-domain connection route and the network service management device designs an intra-domain route so as to satisfy the required quality level [column 4 «lines 16-33» | column 8 «lines 29-46»]. It would have been obvious to one of ordinary skill in the art to modify Giese with the inter-domain and intra-domain routing functionality as taught by Arunchalam. One would have been motivated by Arunchalam's teachings to incorporate the functionality into Giese for the benefit of providing increased service level negotiation capability.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Freen et al, U.S Patent No. 5.959.985;

Kanevsky et al, U.S Patent No. 6.480.861;

Doshi et al, U.S Patent No. 6.529.499;

Ngyuen et al, U.S Patent No. 6.594.279;

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Chiu et al, U.S Patent No. 6.744.767

Krishnamurthy et al, U.S Patent No. 6.910.024;


Patel et al, U.S Patent No. 7.043.225.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Thursday [7:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DC



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